

Redo Minimally Invasive Mitral Valve Surgery With Hypothermic Ventricular Fibrillation: A Potential Approach To A Challenge

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Introduction

- Redo minimal invasive mitral valve surgery is a specialized and technically demanding
- Minimally invasive approaches combined with hypothermic ventricular fibrillation (HVF) offer a potential solution, especially for high-risk patients
- This study evaluates the safety and outcomes of redo MIMVS using HVF and compares them to conventional surgical techniques

Discussion

- Although operative durations were longer, perioperative outcomes of redo MIMVS with HVF were non-inferior to standard approaches
- The technique avoids aortic cross-clamping and extensive dissection, reducing risk in patients with prior grafts or prosthetic valves
- These findings support HVF as a safe and feasible strategy in selected redo mitral valve cases

Methods

- A retrospective case series of 10 patients who underwent redo MIMVS with HVF was analyzed
- Clinical parameters such as CPB time, surgery time, hospital stay, MACCE, mortality, and acute kidney injury were recorded
- Outcomes were compared to published benchmarks and typical results from conventional sternotomy-based redo surgeries

Results

- Average surgery time and CPB time were longer in the HVF group (210 min and 120 min, respectively), while hospital stay was shorter (6.5 days)
- One patient died due to non-cardiac reasons (vasculitis)
- None of the other patients had AKI, MACCE

